What is claimed is:

1. A method for the production of rubber mixtures in a ram kneader or in an aggregate combination of a ram kneader and a preferably thereunder disposed ram-less kneader, the process comprising:

applying a fluid in a surface covering application onto the mixture which has been handled in the ram kneader at the same time as during at least one of a time during the mixing process at which there occurs at least one of an enlargement of the working volume of a ram of the ram kneader, during the discharge process in which the mixture is discharged from the ram kneader, and during a time at which the mixture which has been transferred over to, and is in, the ram-less kneader, the boiling point of the fluid being less than the desired end temperature of the mixture and the fluid being evaporated during the course of further working of the mixture in a manner by which no fluid remnants remain.

2. A method according to claim 1, wherein the enlargement of the working volume of the ram kneader is effected via at least one of clearance movement of the ram, enlargement of the spacing of the axles of rotors of the ram kneader, and the opening of a discharge flap.

3. A method for the production of a rubber mixture in an aggregate combination comprised of a ram kneader and a preferably thereunder arranged ram-less kneader, the process comprising:

applying fluid onto the inner metal surfaces of the ram-less kneader, with a selected one of an accompanying application of air, preferably dry air, onto such surfaces, and no accompanying application of air, such that the inner metal surfaces of the ram-less kneader are cooled

before or during the transfer over of the mixing product from the ram kneader into the ram-less kneader, whereby the fluid evaporates during the course of further working of the mixture in a manner by which no fluid remnants remain.

4. A method according to claim 1, wherein the fluid is introduced via at least one of injection and spraying.

5. A method according to claim 1, wherein the evaporation of the applied fluid is accelerated via an air stream, and in particular, via an air stream introduced by means of a fan or ventilator.

6. A method according to claim 1, wherein the boiling point of the applied fluid is lowered via evacuation below the desired end temperature of the mixture.

7. A method according to claim 6, wherein the evacuation is effected via compartmentalization or bulkheading of an intermediate space between the discharge opening of the ram kneader and the charge opening of the ram-less kneader.

8. A method according to claim 1, wherein the fluid is applied in the amount of 5 to 20 parts by weight of fluid per 100 parts by weight of the mixture.

9. A method according to claim 1, wherein the fluid is applied via a selected one of a single portion and multiple portions.

10. A method according to claim 1, wherein the fluid comprises reactive additives in emulsified or suspended form therein, which are added into the mixture.

11. A method according to claim 10, wherein the emulsions or suspensions are added into the mixture in the ram-less kneader.

12. A method according to claim 10, wherein the additives are emulsified or suspended in a fluid volume which comprises between 0.1 to 10% of the volume of the mixture.

13. A method according to claim 10, wherein the fluid is applied in the form of water.

14. A method according to claim 14, wherein the water contains at least one wetting agent.

15. A method according to claim 14, wherein the water has at least one of an anionic, cationic and non-ionic wetting added thereto.

16. A method according to claim 15, wherein the wetting agent added to the water has a concentration of between 0.01 to 5% by weight, and preferably, from 0.2 to 1% by weight.

17. A method according to claim 14, wherein the water has a wetting agent added thereto which prevents the formation of deposits of lime.

18. A method according to claim 1, wherein the fluid is applied in the form of ethanol.